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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,295	07/14/2003	Michael Lee	NKTZ 2 00061	6308

27885 7590 04/02/2009

Fay Sharpe LLP
1228 Euclid Avenue, 5th Floor
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Cleveland, OH 44115

EXAMINER

ART UNIT PAPER NUMBER

DATE MAILED: 04/02/2009

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/619,295

Applicant(s)

LEE, MICHAEL

Examiner

Stephen L. Blau

Art Unit

3711

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6, 7, 9, 10, 20, 22, 23, 26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6, 7, 9, 10, 20, 22, 23, 26 and 27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Reopening of Prosecution

1. In accordance with article 1214.07 this application is being reopened after a final decision of the Board of Patent Appeals and Interferences due to new prior art being applied to the claims.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This rejection is the same rejection of these claims where the Examiner was affirmed in the BPAI Decision dated 29 January 2009. Claims 6-7, 9-10, 20, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elkins (D244,558) in view of Elkins (4,128,242), Viollaz (5,447,311), and Motomiya (4,438,931).

Elkins (D244,558) discloses head having a blade surface and a muscle back surface having an extra mass portion (Fig. 6), a muscle back surface having an upper

ledge that generally follows the contour of the top edge (Figs. 1-2), a blade surface being near a top edge and substantially parallel to the front face (Figs. 1-2, and 6-7), a muscle back portion covering at least half of the surface area of the rear surface (Fig. 1), and a thin sole and the distance between the front surface and the rear surface adjacent the sole is less than the distance between the front surface adjacent the top edge in the form of the lower edge ends with a point (Fig. 6).

Elkins (D244,558) lacks a cavity disposed in a muscle back portion with the cavity not visible from the exterior of a club and having no visible cavity thereon, a cavity vertically spaced from the sole, a substantial portion of the extra mass portion being positioned below the cavity, an elastomer at least substantially filling a cavity and an elastomer being a polyurethane.

Elkins (4,128,242) discloses a head having a blade surface and a muscle back surface (Fig. 7), a cavity (53) disposed in a muscle back portion with a cavity (Figs. 7-8), a cavity vertically spaced from a sole (Fig. 7) and the cavity not visible from the exterior of a club in the form of being able to pour a filler into the cavity (53) and then placing a plug (55) over the cavity (Col. 12, Lns. 30-45) in order to have the moment of inertia about the center of gravity maximized by positioning weight at the heel and toe and in order to add effective loft to a head by having a center of gravity low (Col. 12, Lns. 19-67). In view of the patent of Elkins (4,128,242) it would have been obvious to modify the head of Elkins (D244,558) to have a cavity disposed in a muscle back portion with the cavity not visible from the exterior of a club and a cavity vertically spaced from the sole in order to have the moment of inertia about the center of gravity

maximized by positioning weight at the heel and toe and in order to add effective loft to a head by having a center of gravity low.

Elkins (D244,558) has a lip at the back sole which one skilled in the art may define as forming a cavity on the back of the muscle back portion. Viollaz discloses a cavity not visible from an exterior of a club, a cavity vertically spaced from the sole (Figs. 4-5), a thin sole (Fig. 4), a muscle back surface being rounded and having no visible cavity thereon (Figs. 2-3), a substantial portion of the extra mass portion being positioned below the cavity in the form of the bottom cavity wall being a substantial greater thickness than the top cavity wall (Fig. 4) and a cavity substantially filled with a foamed urethane in the form of polyurethane (Col. 2, Lns. 46-50). In view of the patent of Viollaz it would have been obvious to modify the head of Elkins (D244,558) to have no lip where the muscle back surface intersection with the sole surface, and a substantial portion of the extra mass portion being positioned below the cavity in order to have a more rounded intersection where the rear surface and the sole surface intersect and as such have a head with less interaction with the ground when impacting the back of the sole with the ground when impacting a ball on the ground and still have a weighted sole section. As such there would be a muscle back portion having no visible cavity thereon. In view of the patent of Viollaz it would have been obvious to modify the head of Elkins (D244,558) to have the cavity substantially filled with foamed polyurethane in order to provide vibration dampening to a head at impact and in order to utilize a shock absorption material placed inside heads used in the market place.

Motomiya discloses filling a sealed space with an elastic filler material such as foamed urethane and rubber (Col. 2, Lns. 14-16). In view of the patent of Motomiya it would have been obvious to modify the head of Elkins (D244,558) to have a polyurethane being a high rebound foamed elastomer filling a cavity in order to utilize a type of urethane shock absorption material used in the market place inserted in cavities of heads.

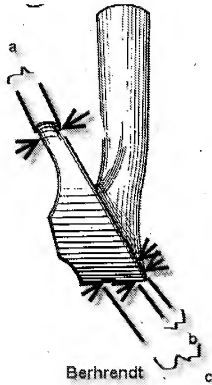
4. This rejection is a new rejection due to the Examiner being reversed for the rejection of claim 22 in the BPAI Decision dated 29 January 2009. Claims 22-23, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elkins (4,128,242) in view of Behrendt (D164,469), Viollaz (5,447,311) and Motomiya (4,438,931).

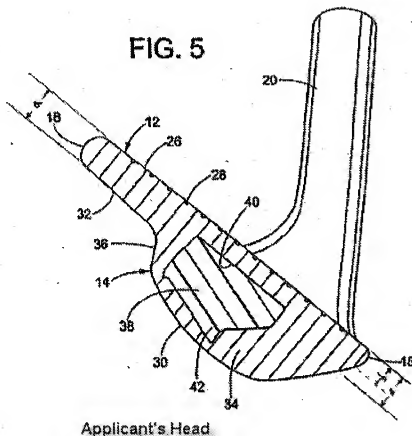
Elkins (4,128,242) discloses a head having a blade surface and a muscle back surface (Fig. 7), a blade surface being near a top edge and substantially parallel to the front face (Fig. 7), a muscle back portion covering at least half of the height of the rear surface as viewed from the toe end (Fig. 7), a cavity (53) disposed in a muscle back portion with a cavity (Figs. 7-8), a cavity vertically spaced from a sole (Fig. 7) and the cavity not visible from the exterior of a club in the form of being able to pour a filler into the cavity (53) and then placing a plug (55) over the cavity (Col. 12, Lns. 30-45) in order to have the moment of inertia about the center of gravity maximized by positioning weight at the heel and toe and in order to add effective loft to a head by having a center of gravity low (Col. 12, Lns. 19-67). Elkins (4,128,242) does not disclose the back view of the head but does show the outline of the cavity inside the

head (Fig. 8). Clearly one skilled in the art in designing the back would have selected a suitable design from toe to heel to support the outline cavity shown in figure 8 in which having a muscle back surface having an upper ledge that generally follows the contour of the top edge and a muscle back portion covering at least half of the surface area of the rear surface are included.

Elkins (4,128,242) lacks a muscle back surface having an upper ledge that generally follows the contour of the top edge, a muscle back portion covering at least half of the surface area of the rear surface, a thin sole and the distance between the front surface and the rear surface adjacent the sole is less than the distance between the front surface adjacent the top edge, a cavity disposed in a muscle back portion with the cavity not visible from the exterior of a club and having no visible cavity thereon, a substantial portion of the extra mass portion being positioned below the cavity, an elastomer at least substantially filling a cavity and an elastomer being a polyurethane.

Behrendt discloses an iron with a blade surface and a muscle back surface having a thin sole and the distance between the front surface and the rear surface adjacent the sole is less than the distance between the front surface adjacent the top edge as measured by the Applicant which is approximately perpendicular from the striking face surface (Fig. 2). See drawings in next sheets comparing the Applicant's measurements on the Applicant's inventive head (Page 6 of the Brief dated 20 February 2007) and the Examiner measuring the same way on the head of Behrendt.





In view of Behrendt it would have been obvious to modify the head of Elkins (4,128,242) to have a thin sole and the distance between the front surface and the rear surface adjacent the sole being less than the distance between the front surface adjacent the top edge in order to have a sharp leading edge of an iron which easily cuts through the ground when the swing requires a divot to be produced so the golfer feels less obstruction from the ground when producing a divot.

Elkins (4,128,242) has a lip at the back sole which one skilled in the art may define as forming a cavity on the back of the muscle back portion. Viollaz discloses a

cavity not visible from an exterior of a club, a cavity vertically spaced from the sole (Figs. 4-5), a thin sole (Fig. 4), a muscle back surface being rounded and having no visible cavity thereon (Figs. 2-3), a substantial portion of the extra mass portion being positioned below the cavity in the form of the bottom cavity wall being a substantial greater thickness than the top cavity wall (Fig. 4) and a cavity substantially filled with a foamed urethane in the form of polyurethane (Col. 2, Lns. 46-50). In view of the patent of Viollaz it would have been obvious to modify the head of Elkins (4,128,242) to have no lip where the muscle back surface intersection with the sole surface, and a substantial portion of the extra mass portion being positioned below the cavity in order to have a more rounded intersection where the rear surface and the sole surface intersect and as such have a head with less interaction with the ground when impacting the back of the sole with the ground when impacting a ball on the ground and still have a weighted sole section. As such there would be a muscle back portion having no visible cavity thereon. In view of the patent of Viollaz it would have been obvious to modify the head of Elkins (4,128,242) to have the cavity substantially filled with foamed polyurethane in order to provide vibration dampening to a head at impact and in order to utilize a shock absorption material placed inside heads used in the market place.

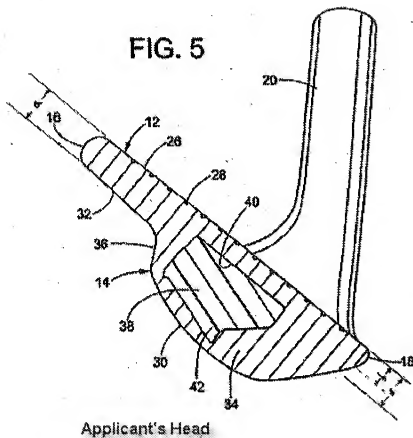
Motomiya discloses filling a sealed space with an elastic filler material such as foamed urethane and rubber (Col. 2, Lns. 14-16). In view of the patent of Motomiya it would have been obvious to modify the head of Elkins (4,128,242) to have a polyurethane being a high rebound foamed elastomer filling a cavity in order to utilize a

type of urethane shock absorption material used in the market place inserted in cavities of heads.

It would have been obvious to modify the head of Elkins (4,128,242) to have a muscle back surface having an upper ledge that generally follows the contour of the top edge and a muscle back portion covering at least half of the surface area of the rear surface in order to maximize lowering the center of gravity of the head and in order to have the generally same cross section of the head from face to back as shown from the toe view in figure 7 all the way to the heel to make the head generally symmetric so ball hits on the toe or heel side of the face have the same performance.

Response to Arguments

5. In the Appeal Brief filed 20 February 2007 the Applicant when measuring the thin sole for the distance between the front surface and the rear surface and comparing it to the distance adjacent the top edge to see if it is less it all depends on where from the front face the Applicant is measuring. This distance varies depending on the location on the front face from the bottom of the head. The Applicant even shows that this distance varies as such (See the following drawing from Page 6 of the Brief dated 20 February 2007).



In the Brief dated 20 February 2007 on page 6 the Applicant argued that Elkins (D244,558) and Elkins (4,128,242) do not show this but a wide sweep sole and shows a figure 6 and a figure 4 as shown next.

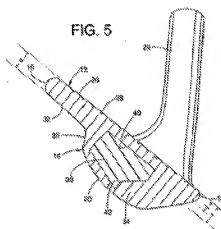
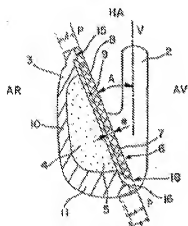
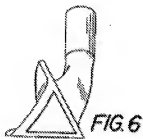
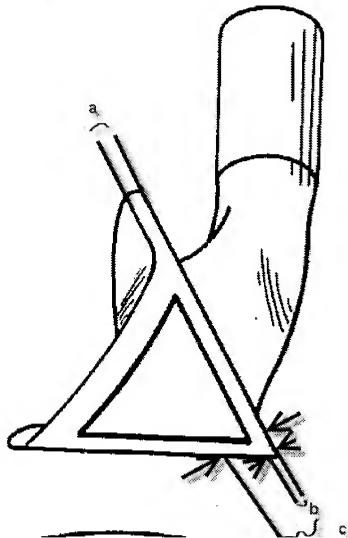


Figure 6 is what the Examiner was relying on to show this element of structure but figure 4 which is not a figure of any of Elkins' patents but the reference of Viollaz (5,447,311). The Examiner failed to bring up that figure 4 was not any figure in Elkins (4,128,242) or Elkins (D244,558) and as such the Examiner believes he was reversed with the board believing it was with no argument from the Examiner. But Elkins (D244,558) which the Examiner relied on before the BAPI clearly shows this feature using the method the Applicant uses to measure these distances. See next drawing.



As you can see with Elkins (D244,558) it is the same with the Applicant's head.
The distance of the sole varies depending on the location on the front face from the

bottom of the head one takes to measure the distance. As such it is the opinion of the Examiner that the prosecution should be reopened.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen L. Blau whose telephone number is (571) 272-4406. The examiner can normally be reached on Mon - Fri 10:00 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eugene Kim can be reached on (571) 272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

The reopening of prosecution requires a directors signature under 37 CFR 1.198.

/Robert P Olszewski/
Director, Technology Center 3700